MONDAY WEEK 6 _____ MATH PRACTICE

Name

1. A crow flies at a speed of 25 mph. A dragonfly's speed is 18 mph, while some race horses can run at 43 mph. An ostrich runs at a top speed of 45 mph, and an elephant can move up to 25 mph. A cat's top speed is about 6 mph.

   a. What is the median of this group of data?

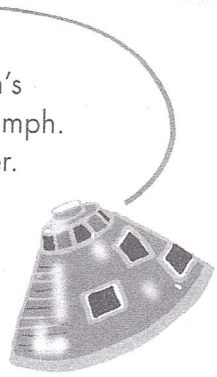
   b. What is the mode of this group of data?

2. Finish the number sentence to show the commutative property.

   $9x + 33 + x^2 =$ _____

3. The *Apollo 10* spacecraft reentered Earth's atmosphere at a speed of about 18,600 mph. Use scientific notation to write this number.

4. Solve: $7x - 3 = 5x + 4^2 - 1$



5. Pedaling at a record-setting speed, a man on a unicycle covered 72 miles in 4 hours.

   a. At this rate, how long would it take him to travel 216 miles?

   b. If, after the first four hours, his rate slowed by 5 mph, how far could he travel in 7 hours?

TUESDAY WEEK 6 _____ MATH PRACTICE

Name

1. The *Concorde* supersonic jet flew at 1,354 mph. This number is equal to or greater than twice the speed of an ordinary jumbo jet.

   Use j to represent the jumbo jet. Write an expression to show the above information.

2. Evaluate: $(\frac{-9}{4})(\frac{-6}{27})$

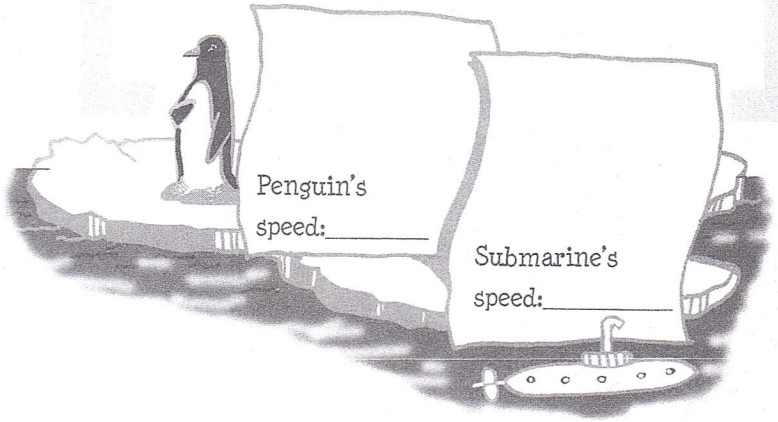
3. Find three different values for **x**.

   $x \leq \sqrt{121}$

4. Solve: $3b^2 + 10 = 110 - b^2$

5. A submarine and a penguin have something in common: They can both move swiftly through water. Combined, their speeds total 74 mph. The sub's speed is 8 mph greater than twice the penguin's speed.

   Write and solve an equation to find the speeds of these two "swimmers."



WEDNESDAY WEEK 6 _____ MATH PRACTICE

Name

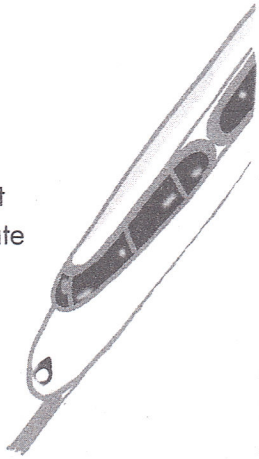
1. Which operation is done last?

   $15 + (6)(3)(12 - 9)^2$

2. Japan's bullet train travels at 143 mph. This is 8.7% of the speed of a real bullet shot from a rifle. What is the approximate speed of the rifle bullet?

3. Simplify:

   $6 + 3x - 4 + x \geq y + 9 - 3y + 5$



4. Find and describe the error that was made in the process of solving this equation.

$$4p + 3 + 2p = 3 - 6$$
$$6p + 3 = -3$$
$$6p = 0$$
$$p = 0$$

5. Write T (true) or F (false) for each statement.

___a. To add two exponential numbers with different coefficients, add the coefficients, then add the exponents.

___b. You cannot add exponential numbers with different bases.

___c. To subtract two exponential numbers with the same coefficient, subtract the bases and keep the coefficient the same.

___d. You cannot subtract any exponential number from another exponential number.

THURSDAY WEEK 6 _____ MATH PRACTICE

Name

1. Multiply: $(\sqrt[4]{16})(\sqrt{0})$

2. Evaluate for $x = -6$.

$$\frac{8x - 28}{2x^2 + 4}$$

3. The fastest sneeze recorded traveled at one hundred three and six-tenths miles per hour. Use standard notation to write a number that is twelve and nine hundredths less than that number.

4. Factor: $3ab^2 + 9a - 12a$

5. Circle any statements about a linear equation that are TRUE.

a. It has more than two variables.

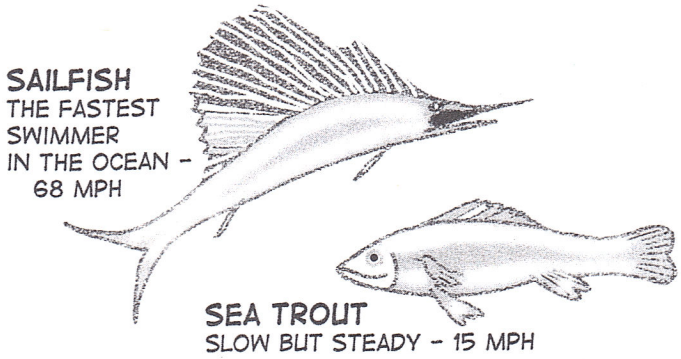
b. IT CONTAINS NO VARIABLE WITH POWERS > 1.

c. There is no variable in the denominator of any fraction.

d. Its graph can be a straight or curved line.

e. It may involve one or more basic operations (addition, subtraction, multiplication, division).

Name



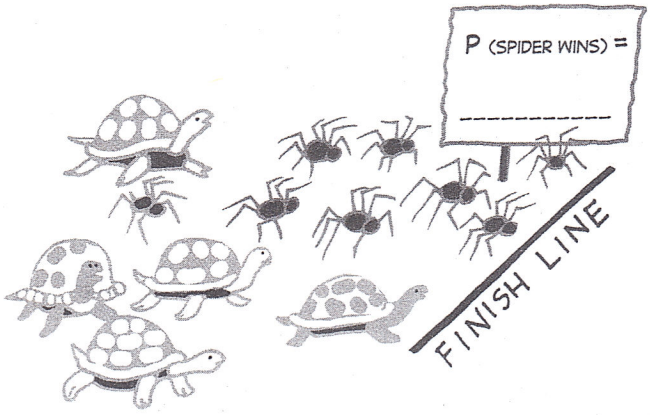
1. Write two different expressions to show the relationship between the speed of the sailfish and the speed of the sea trout. Use ***s*** to represent the sailfish speed and ***t*** to represent the trout speed.

2. Solve:

$$5(2n - 2) = 3(n - 1) + 7$$

3. Seven spiders and five turtles are racing. All are moving at a similar pace of 0.25 mph. What is the probability that the winner could be a spider?

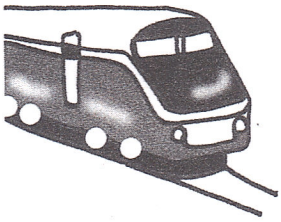
$\frac{5}{7}$ $\frac{7}{12}$ $\frac{5}{12}$ $\frac{7}{5}$



4. Multiply:

$$(9x + x^2)(y + 5)$$

5. Challenge Problem



Two trains travel on tracks that run parallel to each other. Their starting points are 3740 miles apart. The first train, the *Silver Streak*, travels from northwest to southeast at 90 mph. The second train, the *Red Blaze*, travels from southeast to northwest at 80 mph. They start their journeys at the same time—midnight EST—and move toward each other. Assume that they travel at steady speeds without stops and without interruption.

a. At what time will the trains meet?

b. How far will the *Silver Streak* have traveled when they meet?

c. How far will the *Red Blaze* have traveled when they meet?

d. Explain how you solved the problem.